vised by some authors and may be useful in preventing postoperative sagging.

An alternate approach to the local brow lift is an elliptical excision in the temporal hair line with undermining and elevation of forehead skin. This technique requires more dissection and is less accurate in the final brow positioning than is the local resection. One obvious disadvantage of a local brow lift is the visible scar that results. With proper suture technique and satisfactory use of cosmetics and eyebrow pencil for cover-up, however, this drawback is minimal.

JAMES N. THOMPSON, MD

#### REFERENCES

Rafaty FM, Goode RL, Fee WE: The brow-lift operation. Arch Otolaryngol 101:467-468, Aug 1975

Rees TD, Wood-Smith D: Cosmetic facial surgery. Philadelphia, WB Saunders Co, 1973, p 180

### Local Anesthesia of the Ear by lontophoresis

LOCAL ANESTHESIA of the ear canal and tympanic membrane by iontophoresis is an effective and painless procedure. In the past, the application of topical solutions to obtain anesthesia has been disappointing. Injections of local anesthetics have been painful, particuarly in children. Comeau and co-workers have revised Albrecht's method of iontophoresis so that it is an efficient means of anesthetizing the tympanic membrane for myringotomies and can be used for procedures involving the ear canal.

Iontophoresis is a process utilizing direct electrical current by which chemical agents such as epinephrine and lidocaine can be caused to migrate through intact skin. The ions in the anesthetic are positively charged and driven through the skin by the repelling action of the positive electrode (direct current). A fresh solution of 2 percent lidocaine (Xylocaine®) and 1:2000 epinephrine is used. Anesthesia of the tympanic membrane occurs in ten minutes.

The principal advantages of this technique are that the procedure is painless and much less bleeding occurs. The vertigo that occasionally occurs after Xylocaine® injection is avoided. This method of anesthesia is especially beneficial in myringotomies and in inserting collar-button tubes in children.

W. HUGH POWERS, MD

### REFERENCES

Comeau M, Brummettr VJ: Local anesthesia of the ear by iontophoresis. Arch Otolaryngol 98:114-120, Aug 1973
Albrecht W: Neue Versuche zur lokalen Anasthesierung des Trommelfells. Arch F Ohrenh 85:198-215, May 1911

## Recurrent Laryngeal Nerve Section for Spastic Dysphonia

SPASTIC DYSPHONIA is a severe vocal disability in which a person speaks with excessively adducted vocal cords. The resulting weak phonation sounds tight, as if the patient were being strangled, and has also been described as laryngeal stutter. It is often accompanied by face and neck grimaces. In the past spastic dysphonia has been regarded as psychoneurotic in origin and has been treated with speech therapy and psychotherapy with disappointing results.

Because of laboratory and clinical observation that recurrent nerve paralysis retracts the involved vocal cord from the midline, it was proposed that deliberate section of the recurrent nerve would improve the vocal quality of patients with spastic dysphonia. In 72 patients the recurrent nerve has been sectioned after lidocaine (Xylocaine®)-induced temporary paralysis showed significant improvement in vocal quality. With nerve section in addition to postoperative speech therapy, approximately half of the patients have close to a normal but soft phonatory voice. In the rest there were varying degrees of improvement, but all, so far, have been pleased with the improvement in ease and quality of phonation and in reduction or elimination of face and neck grimaces. Two men have a breathy component in their phonatory voices, and one woman has variable pitch. In three patients spasticity has redeveloped 4 to 7 months postoperatively. In one of these the situation has been corrected by superior laryngeal nerve section.

HERBERT H. DEDO, MD

#### REFERENCES

Dedo HH: Recurrent laryngeal nerve section for spastic dysphonia. Ann Otol Rhinol Laryngol 85:451-459, Aug 1976
Brodnitz FS: Spastic dysphonia. Ann Otol Rhinol Laryngol 85:210-214, Aug 1976

# Daytime Sleepiness Caused by Nighttime Airway Obstruction

EXCESSIVE DAYTIME SLEEPINESS, especially in overweight men, can be caused by an intermittent airway obstruction during sleep. This sleep apnea syndrome has parallels with the better known but much less common pickwickian syndrome, and also can occur in children. The most important feature of this syndrome is that all of the patients we have encountered so far, and most of their physicians too, are completely unaware that